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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,412	11/14/2001	Akifumi Hosoya	111106	7048

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EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,412

Applicant(s)

HOSOYA ET AL.

Examiner

Guillermo Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 14 June 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

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DETAILED ACTION

Drawings

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on June 14, 2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-3, 6, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al. (U. S. Pat. 6,026,558).

Referring to claim 1, Yoshida et al. disclose a rotary electric machine, comprising:

an armature core (2) having a predetermined number of slots (8);

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an armature coil (4,5) having a predetermined number of lower layer coils (4) and upper layer coils (5) installed in double layers in each of the slots (8) against the armature core (1), the lower layer coils (4) and the upper layer coils (5) each having a straight portion (4a,5a) and an arm portion (4b,5b) bent generally perpendicularly from the straight portion (4a,5a);

an insulating plate (7) interposed for insulation between the arm portion (4b) of the lower layer coil (4) and the arm portion (5b) of the upper layer coil (5) which are provided axially outside of an axial end surface of the armature core (1);

a cylindrical body (53 or 54) circularly surrounding an outer periphery of a coil end portion (see figure 24) that is a part of the straight portion (5a) of the upper layer coil (5), which protrudes axially outside of the axial end surface of the armature core (1) and excludes the arm portion (5b) of the upper layer coil (5), the cylindrical body (1)⁵ allowing outer grooves provided between adjacent two of the arm portions (5a see figure 30) of the upper layer coils (5) to open in a radially outward direction (see figure 24); and

a resin insulator (55) filled in an inner groove defined among adjacent coil end portions (see figure 30) in a peripheral direction, the axial end surface of the armature core (1) and the insulating plate (7 see figure 3).

Referring to claim 2, Yoshida et al. disclose that the cylindrical body (53,54) is fixed on the outer periphery of the coil end portion with the resin insulator (55).

Referring to claim 3, Yoshida et al. disclose that the arm portions (5b) of the upper layer coils (5) construct commutator segments of a commutator.

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Referring to claim 6, Yoshida et al. disclose that the cylindrical body (53,54) is fixed in accordance with hardening of resin (55) which is filled to provide the resin insulator (55).

Referring to claim 9, Yoshida et al. disclose a rotary electric machine, comprising:

- an armature core (1) having a predetermined number of slots (8);

- an armature coil (4,5) having a predetermined number of lower layer coils (4) and upper layer coils (5) installed in double layers in each of the slots (8) against the armature core (1), the lower layer coils (4) and the upper layer coils (5) each having a straight portion (4a,5a) and an arm portion (4b,5b) bent generally perpendicularly from the straight portion (4a,5a), arm portions (5b) of the upper layer coils (5) constructing commutator segments of a commutator;

- brushes held for sliding contact with the commutator segments;

- an insulating plate (7) interposed for insulation between the arm portion (4b) of the lower layer coil (4) and the arm portion (5b) of the upper layer coil (5) which are provided axially outside of an axial end surface of the armature core (1);

- a resin insulator (55) filled in an inner groove defined among adjacent straight portions of the upper layer coils (5), an axial end surface of the armature core (1) and the insulating plate (7 see figures 28,29); and

- a cylindrical body (53,54) mounted on outer peripheries of the straight portions of the upper layer coils (5) axially outside of the axial end surface of the armature core (1)

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and fixed therewith with the resin insulator (55), wherein the resin insulator (55) is provided separately from the insulating plate (7) and the cylindrical body (53,54).

Referring to claim 11, Yoshida et al. disclose that the insulating plate (7) is disposed to divide a groove between adjacent upper coil layers (5) into the inner groove and an outer groove axially outside of the armature core (1), thereby restricting the resin insulator (55) filled in the inner groove from flowing into the outer groove.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4-5, 7-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. in view of Shiga et al. (U. S. Pat. 5,508,577).

Yoshida et al. substantially teaches the claimed invention except that it does not show that the cylindrical body is mounted without protruding in an axial direction from a surface of the insulating plate which faces the arm portion of the upper layer coil.

Yoshida et al. do not disclose that the resin insulator is provided only underneath the cylindrical body. Yoshida et al. do not disclose that the cylindrical body is made of non-magnetic material. Yoshida et al. do not disclose mounting the cylindrical body after filling the liquid resin and before the liquid resin hardens.

Shiga et al. disclose that the cylindrical body (600) is mounted without protruding in an axial direction from a surface of the insulating plate (560) which faces the arm portion (534) of the upper layer coil (533). Shiga et al. disclose that the resin insulator is provided only underneath the cylindrical body (column 4, lines 45-52). Shiga et al. disclose that the cylindrical body (600) is made of non-magnetic material (column 12, lines 34-44). The invention of Shiga et al. has the purpose of reducing mechanical and thermal loads.

It would have been obvious at the time the invention was made to modify the machine of Yoshida et al. and provide it with the cylindrical body and resin insulator configuration disclosed by Shiga et al. for the purpose of reducing mechanical and thermal loads.

Referring to claim 8, no patentable weight has been given to the method of manufacturing limitations (i. e. "*mounting the cylindrical body after filling the liquid resin and before the liquid resin hardens*") since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
September 4, 2002


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